4/30/98

IN THE CLAIMS:

Please cancel Claims 40-61, without prejudice or disclaimer of subject matter.

Please amend Claims 1-3, 6-11, 13-16, 18-22, 25-30, 32-35, and 37-39, and add new Claims 62-67 as follows (a complete listing of all the claims appears below):

Claim 1 (currently amended): A data transfer apparatus for transferring data to a device ~~connected by a serial bus~~, comprising:

band width calculation means for calculating a band width based on a performance of ~~the~~ a predetermined device among a plurality of devices;

first channel ensuring means for ensuring a channel having the band width calculated by the band width calculation means; ~~and~~

B1 transfer means for transferring data ~~with~~ to the predetermined device using the channel ensured by the first channel ensuring means, if a destination of a data transfer is set to the predetermined device; and

second channel ensuring means for ensuring a channel corresponding to the data transfer, if the destination of the data transfer is not set to the predetermined device.

Claim 2 (currently amended): The apparatus according to claim 1, wherein the predetermined device is a ~~printer~~ device set as a preferential device.

Claim 3 (currently amended): The apparatus according to claim 2, wherein the

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band width calculation means calculates a band width necessary for a data transfer with the a printer based on a processing speed of the printer.

Claim 4 (previously amended): The apparatus according to claim 3, wherein the processing speed of the printer is based on at least one of a print speed, a print resolution, and a printer bit depth.

Claim 5 (previously amended): The apparatus according to claim 3, wherein the processing speed of the printer is based on at least one of a main scanning period in printing, a number of pixels formed in the main scanning period, and a number of bits representing one pixel.

Claim 6 (currently amended): The apparatus according to claim 1, further comprising:

~~second channel ensuring~~ determination means for ~~ensuring a second channel~~ determining whether a destination of data transfer is the predetermined device; and

second transfer means for performing data transfer ~~with~~ to another device other than the predetermined device using the ~~second~~ channel ensured by the second channel ensuring means, if the destination of the data transfer is not the predetermined device.

Claim 7 (currently amended): The apparatus according to claim 1, wherein the

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transfer means performs an isochronous transfer.

Claim 8 (currently amended): The apparatus according to claim 7, wherein, when no request for the data transfer ~~with~~ to the predetermined device is performed, the transfer means sends invalid data ~~to~~ using the channel ensured by the first channel ensuring means.

Claim 9 (currently amended): The apparatus according to claim ~~1~~ 2, further comprising device setting means for setting at least one of a plurality of devices as the preferential device.

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Claim 10 (currently amended): The apparatus according to claim 9, ~~wherein the device setting means sets at least two devices as the~~ further comprising determination means for determining whether a destination of a data transfer is the predetermined device.

Claim 11 (currently amended): The apparatus according to claim 7, further comprising control means for, when a band width necessary for a data transfer with another device other than the predetermined device is not more than a predetermined value, controlling to perform a data transfer with the other device using the channel ensured by the first channel ensuring means.

Claim 12 (previously amended): The apparatus according to claim 11, wherein

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the predetermined value is half a band width calculated by the band width calculation means.

Claim 13 (currently amended): The apparatus according to claim 7, further comprising control means for, when a number of cycles necessary for a data transfer with another device other than the predetermined device is not more than a predetermined value, controlling to perform a data transfer with the other device using the channel ensured by the first channel ensuring means.

Claim 14 (currently amended): The apparatus according to claim 1, further comprising monitoring means for monitoring a usage of the predetermined device by the channel ensured by the first channel ensuring means, wherein the first channel ensuring means ensures the channel again in accordance with the usage of the device.

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Claim 15 (currently amended): The apparatus according to claim 9, further comprising monitoring means for monitoring a usage of the predetermined device by the channel ensured by the first channel ensuring means, wherein the device setting means sets the preferential device again in accordance with the usage of the device.

Claim 16 (currently amended): The apparatus according to claim 9, further comprising monitoring means for monitoring usages of the plurality of devices, wherein the device setting means resets the preferential device in accordance with the usages of the plurality

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of devices.

Claim 17 (previously amended): The apparatus according to claim 1, wherein the channel ensuring means ensures the channel when the band width is not more than a predetermined value.

Claim 18 (currently amended): The apparatus according to claim 1, wherein the predetermined device is connected to a serial bus ~~is a bus~~ complying with an IEEE 1394 standard.

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Claim 19 (currently amended): The apparatus according to claim 1, wherein the predetermined device is connected to a serial bus ~~is a bus~~ complying with a USB standard.

Claim 20 (currently amended): A data transfer method ~~in a system in which~~ for transferring data to a device ~~is connected by a serial bus~~, comprising:

a band width calculation step, of calculating a band width based on a performance of ~~the~~ a predetermined device among a plurality of devices;

a first channel ensuring step, of ensuring a channel having the band width calculated in the band width calculation step; ~~and~~

a transfer step, of transferring data ~~with~~ to the predetermined device using the channel ensured in the first channel ensuring step, if a destination of a data transfer is set to the

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predetermined device; and

a second channel ensuring step, of ensuring a channel corresponding to the data transfer if the destination of the data transfer is not set to the predetermined device.

Claim 21 (currently amended): The method according to claim 20, wherein the predetermined device is a ~~printer~~ device set as a preferential device.

Claim 22 (currently amended): The method according to claim 21, wherein the band width calculation step comprises calculating a band width necessary for a data transfer with the a printer based on a processing speed of the printer.

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Claim 23 (previously amended): The method according to claim 22, wherein the processing speed of the printer is based on at least one of a print speed, a print resolution, and a printer bit depth.

Claim 24 (previously amended): The method according to claim 22, wherein the processing speed of the printer is based on at least one of a main scanning period in printing, a number of pixels formed in the main scanning period, and a number of bits representing one pixel.

Claim 25 (currently amended): The method according to claim 20, further

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comprising:

a ~~second channel ensuring~~ determination step, of ~~ensuring a second channel~~ determining whether a destination of a data transfer is the predetermined device; and

a second transfer step, of performing a data transfer ~~with~~ to another device other than the predetermined device using the second channel ensured in the second channel ensuring step, if the destination of the data transfer is not the predetermined device.

Claim 26 (currently amended): The method according to claim 20, wherein the transfer step comprises performing an isochronous transfer.

Claim 27 (currently amended): The method according to claim 26, wherein, when no request for the data transfer ~~with~~ to the predetermined device is performed, the transfer step comprises sending invalid data ~~to~~ using the channel ensured in the first channel ensuring step.

Claim 28 (currently amended): The method according to claim ~~20~~ 21, further comprising a device setting step, of setting at least one of a plurality of devices as the preferential device.

Claim 29 (currently amended): The method according to claim 28, ~~wherein the device setting step comprises setting at least two devices as the~~ further comprising a

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determination step, of determining whether a destination of a data transfer is the predetermined device.

Claim 30 (currently amended): The method according to claim 26, wherein, when a band width necessary for a data transfer with another device other than the predetermined device is not more than a predetermined value, the transfer step comprises controlling to perform a data transfer with the other device using the channel ensured in the first channel ensuring step.

Claim 31 (original): The method according to claim 30, wherein the predetermined value is half a band width calculated in the band width calculation step.

Claim 32 (currently amended): The method according to claim 26, wherein, when a number of cycles necessary for a data transfer with another device other than the predetermined device is not more than a predetermined value, the transfer step comprises controlling to perform a data transfer with the other device using the channel ensured in the first channel ensuring step.

Claim 33 (currently amended): The method according to claim 20, further comprising:

a monitoring step, of monitoring a usage of the predetermined device by the channel ensured in the first channel ensuring step; and

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a channel re-cnsuring step of ensuring the channel ensured in the first channel ensuring step again in accordance with the usage of the predetermined device.

Claim 34 (currently amended): The method according to claim 28, further comprising:

a monitoring step, of monitoring a usage of the predetermined device by the channel ensured in the first channel ensuring step; and

a device resetting step, of resetting the predetermined device in accordance with the usage of the predetermined device.

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Claim 35 (currently amended): The method according to claim 28, further comprising:

a monitoring step, of monitoring usages of the plurality of devices; and

a device resetting step, of resetting the predetermined device in accordance with the usages of the plurality of devices.

Claim 36 (previously amended): The method according to claim 20, wherein the channel ensuring step comprises ensuring the channel when the band width is not more than a predetermined value.

Claim 37 (currently amended): The method according to claim 20, wherein the

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predetermined device is connected to a serial bus ~~is a bus~~ complying with an IEEE 1394 standard.

Claim 38 (currently amended): The method according to claim 20, wherein the predetermined device is connected to a serial bus ~~is a bus~~ complying with a USB standard.

Claim 39 (currently amended): A data transfer system for transferring data with a device ~~connected by a serial bus~~, comprising:

band width calculation means for calculating a band width based on a performance of ~~the~~ a predetermined device among a plurality of devices;

first channel ensuring means for ensuring a channel having the band width calculated by the band width calculation means; ~~and~~

transfer means for transferring data ~~with~~ to the predetermined device using the channel ensured by the first channel ensuring means, if a destination of a data transfer is set to the predetermined device; and

second channel ensuring means for ensuring a channel corresponding to the data transfer, if the destination of the data transfer is not set to the predetermined device.

Claims 40-61 (canceled)

Claim 62 (new): A data transfer apparatus for transferring data to a device,

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comprising:

channel ensuring means for ensuring a channel for operation based on a preferential mode; and

transfer means for transferring data to the device using the channel ensured by the channel ensuring means, if the data is to be transferred to the device in the preferential mode.

Claim 63 (new): The apparatus according to claim 62, wherein, in the preferential mode, the transfer means transfers the data to a device set as a preferential device.

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Claim 64 (new): The apparatus according to claim 62, further comprising dummy data transfer means for, in the preferential mode, transferring dummy data using the channel ensured by the channel ensuring means, without a data transfer request.

Claim 65 (new): A data transfer apparatus for transferring data to a device, comprising:

first channel ensuring means for ensuring a channel for a predetermined device among a plurality of devices;

transfer means for transferring data to the predetermined device using the channel ensured by the first channel ensuring means, if a destination of a data transfer is set to the predetermined device; and

second channel ensuring means for ensuring a channel corresponding to the

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data transfer, if the destination of the data transfer is not set to the predetermined device.

Claim 66 (new): The apparatus according to claim 65, further comprising device setting means for setting at least one of a plurality of devices as a preferential device.

Claim 67 (new): The apparatus according to claim 65, further comprising dummy data transfer means for transferring dummy data using the channel ensured by the first channel ensuring means, without a data transfer request.

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